

PART A: Complete the following statements using the following words:

- constant
- displacement

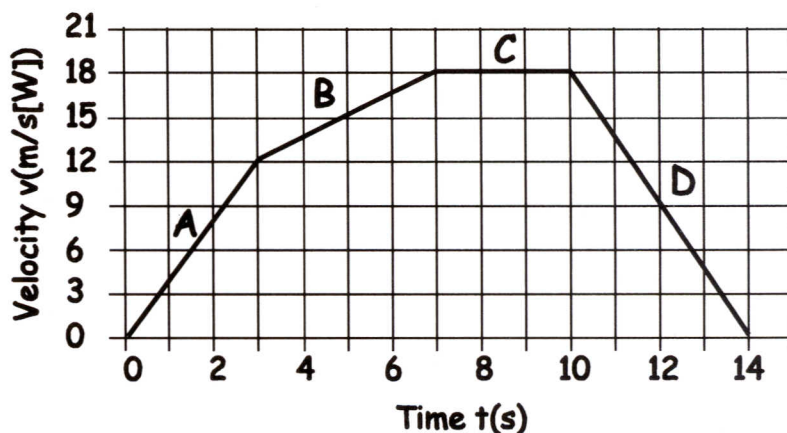
- negative
- positive

- slope (2)
- zero

- ① The velocity-time graph for an object with a _____ acceleration is a straight line with constant slope.
- ② The _____ of the velocity-time graph for an object moving at a constant acceleration gives the value of the constant acceleration.
- ③ On a velocity-time graph
 - ☞ a positive slope represents a _____ acceleration,
 - ☞ a zero slope represents a _____ acceleration, and
 - ☞ a negative slope represents a _____ acceleration.
- ④ The average acceleration between any two points on a velocity-time graph = the _____ of the straight line joining the two points.
- ⑤ _____ can be determined by calculating the area beneath a velocity-time graph.

PART B: Answer questions 1 & 2 below in the space provided. If more room is needed use the back of this sheet or a separate sheet. Answer question 3 on the back of this sheet.

The following shows the velocity-time graph for a dandelion seed blown by the wind. The seed's velocity changes during the four intervals A, B, C, and D.



1. Calculate:

(a) the acceleration during each interval.

(b) the displacement during each interval.

(c) the final position of the dandelion seed.

A

A

B

B

C

C

D

D

2. What is the seed's (i) speed and (ii) velocity at each of the following times:

(a) 2 s

(b) 8 s

(c) 12 s

3. On the back of this sheet describe the motion illustrated in the graph.